

The Tobacco Observer

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Causes Of Cancer Remain Unknown

"The cause or causes of cancer are still unknown," The Tobacco Institute said, in an executive summary of its new report, "Cigarette Smoking and Cancer: A Scientific Perspective."

The TI report—a heavily documented review of research literature—was issued four days prior to the recent Surgeon General's report on smoking. The TI document is, the trade association said in a memorandum to news correspondents, "a contribution to public dialogue on the significant question of whether cigarette smoking is a cause of cancer."

The lack of knowledge about cancer, TI said in the summary, "is reflected in the substantial sums of money spent on basic cancer research in the continuing debate on the causes of cancer, and in the frequent, often contradictory, reports about the possible causal roles of many things encountered in everyday life."

"Scientific findings in this area are frequently inconsistent. Data are often incomplete or inadequate and subject to different interpretations, depending on the attention given to such factors as environmental and occupational exposures, lifestyle, heredity, and diet," according to TI's executive summary. "Cancer is one of the most serious problems in biology," the new TI report said.

"Even after many years of investigation and millions of research dollars, scientists still are unable to describe the mechanisms by which normal cells are transformed into malignant, or cancerous cells," the TI report said. It stressed that it is still undetermined whether tobacco smoke plays any role in cancer causation.

Animal Experiments

TI's report notes the repeated failure of animal smoke inhalation experiments to produce the type of lung cancer most frequently associated statistically with cigarette smoking. The report quotes a physician at Yale University: "No well-designed and well-conducted experiments have shown that cigarette smoke causes lung cancer in animals."

TI's Chairman Horace R. Kornegay is quoted in its news release explaining that, "While many people believe that a causal link between smoking and cancer is a given, scientific research has not been able to establish that link nor has it been able to determine how normal cells become cancerous."

"An essential step in the war against cancer is to discover the basic mechanisms by which a cell becomes cancerous," said Kornegay. "Until that is accomplished, specific causes of cancer cannot be scientifically established."



(Photos by Bob Krusner)

Surgeon General C. Everett Koop, at the news conference releasing his new report on smoking, said teenage smoking among both boys and girls has been steadily decreasing. He called this a "most encouraging trend." Koop is the sixth Surgeon General to release a report on smoking and health.

Lung Cancer/Smoking Link Evidence Called Deficient

While the new, 302-page Surgeon General's report on smoking claims that cigarettes are the major cause of lung cancer, a new report issued by The Tobacco Institute highlights what it calls "significant deficiencies in the evidence purporting to link cigarette smoking with various forms of cancer."

TI's 104-page document examines the findings of a large number of scientific studies dealing with cancer, particularly lung cancer. It was not issued as a response to the Surgeon General's report—although likely drawn from some of the same research literature—but rather as a contribution to the public dialogue on the question of whether cigarette smoking is a cause of cancer. It is titled, "Cigarette Smoking and Cancer: A Scientific Perspective."

Those studies which are used to "prove" that smoking causes cancer are most often epidemiological studies reporting statistical associations, TI said.

TI's chairman, Horace R. Kornegay, in a news release about the Institute's new report, said, "While statistical associations may raise valid questions and suggest possible leads for further research, they do not prove a cause-and-effect relationship."

Large Dilemma

The statistics reported in many of these studies often are inconsistent, TI said, and lend themselves to different interpretations. The report quotes an eminent statistician: "Cancer is a bio-

logic, not a statistical problem."

The report says that those who believe that cigarette smoking causes lung cancer are faced with explaining a large dilemma, the inconsistency of cigarette consumption patterns compared with lung cancer rates around the world.

A country may have one of the highest cigarette consumption levels and yet one of the lowest lung cancer rates, TI said.

TI's report points out that citizens of the U.S. and Canada smoke more cigarettes per capita than citizens of any other nation in the world. However, the countries rank 8th and 15th, respectively, in male lung cancer death rates. Much higher lung cancer death rates occur in England, Finland, and the Netherlands, where fewer cigarettes are smoked per capita, TI said.

"The trends in lung cancer death rates still cannot be explained satisfactorily by smoking patterns," TI's report says.

It also stresses that there is serious concern about the reliability of the data from which mortality rates are calculated. Mortality data are generally based on death certificates, which often contain errors resulting from clinical misdiagnosis and recording mistakes.

Risk Factors

TI's report discusses aspects of everyday life that have been described as possible risk factors for lung and

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Nonsmoker Cancer Claim 'Unresolved,' Govt. Says

Does tobacco smoke cause lung cancer in the nonsmoker?

Recent reports issued by the Surgeon General and The Tobacco Institute agree on two things: There is no conclusive evidence and more research is needed.

A chapter in TI's report, "Cigarette Smoking and Cancer: A Scientific Perspective," stressed that the scientific bases for claims of increased cancer risk for nonsmokers "are highly suspect and not proven."

TI's report pointed out that these claims have received considerable publicity.

Because of this, TI said, insufficient attention has been given "to the scientists who caution that emotion and fear must not be allowed to obscure scientific facts as they currently exist."

An executive summary of TI's report cites a recent study by an American Cancer Society statistician, which concluded that other people's tobacco

smoke has little if any effect on lung cancer risk in nonsmokers.

"Local Issue"

The Surgeon General's report said that "the nature of this association is unresolved." It also stressed that "the currently available evidence is not sufficient to conclude that passive or involuntary smoking causes lung cancer in nonsmokers." But the report does urge nonsmokers to avoid exposure to other people's tobacco smoke to the extent possible.

At a news conference, Edward N. Brandt Jr., M.D., assistant secretary for health, said his advice to nonsmokers is to avoid smoke-filled rooms. He said the evidence in this controversy "is not conclusive by any stretch of the imagination."

Surgeon General C. Everett Koop also called for more research on this issue. He said that restricting smoking in public places is a "local issue," not to be decided by the Federal Government.

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Industry Research Tops \$100 Million

Tobacco industry funding of independent scientific research into the perplexing questions surrounding cancer, heart disease, emphysema, and other chronic diseases, has passed the \$100 million level and has reached nearly \$104 million.

Some \$76 million of the total has been given in grants by the Council for Tobacco Research, called the sponsoring agent for the world's largest non-governmental research program on smoking and health.

CTR, funded by the major U.S. tobacco companies, was established in 1954-10 years before the Surgeon General's report on cigarette smoking and lung cancer—as the Tobacco Industry Research Committee. Among the early leaders was Dr. Clarence Cook Little, a world-famous geneticist who had helped establish the American Cancer Society.

Little, in 1955, made a statement which still might be considered CTR's rationale:

"The history of cancer research is a record of slow but steady progress. There is every reason to expect marked advances in the prevention, treatment, and cure of cancer."

"This is also true of the other constitutional diseases, such as heart ailments, which are our greatest present and future health challenges."

"But this will take time, and we cannot count on shortcuts. Neither the generating of unnecessary fears, nor the arousing of unfounded hopes, will hasten the coming of significant

discoveries."

"Progress in the battle against these great health problems has depended and will depend on solidly planned and well-executed scientific research."

CTR does not have its own research facilities. Its grants, approved by an independent board of 10 eminent scientists and physicians, go directly to institutions and laboratories. It has funded more than 420 scientists at more than 260 medical schools, hospitals, and research facilities. These scientists have complete freedom to publish their findings and have contributed more than 1,925 papers and reports to medical and scientific publications.

Unique Funding

The tobacco industry also provided a 10-year, \$15 million grant to an affiliate of the American Medical Association to study smoking and health issues. Between 1964 and 1975, 844 researchers in 98 institutions produced 795 publications and reports on tobacco and health.

The cigarette companies have also contributed to major research programs at three universities:

- The industry has committed \$5.4 million to a concentrated research effort at Washington University, St. Louis, where a team of scientists is attempting to answer basic questions about cancer.

Said the St. Louis Globe-Democrat in a 1980 feature story about this program: "For nine years, a prestigious

group of researchers at Washington University has been quietly working with millions of dollars from the nation's leading cigarette manufacturers in an effort to untangle the cellular snarl of cancer."

"The tobacco industry money is unique because it comes with no strings attached," Dr. Paul E. Lacy, who heads the research effort, told the newspaper.

"It's almost unbelievable," Lacy said. "They didn't tell us what to do. They didn't try to guide the research. They have never once asked, 'Hey, do you have a cure for cancer yet?'"

In the last two years, 25 published research papers have credited tobacco industry sponsorship of this program, which is also funded by Federal Government and the American Cancer Society.

- The industry contributed \$4.7 million to a research program, begun in 1972 at Harvard Medical School, to analyze pulmonary and cardiovascular

diseases. The program also evaluated environmental factors that may be important in the development of these diseases.

- In 1974, the tobacco industry began what has become a \$2.75 million research commitment at the UCLA School of Medicine for research into lung defense mechanisms, and the early detection and treatment of cancer. That medical school is noted for its strong research programs on tumors, the blood, and the body's defense mechanisms.

Over and above this \$104 million research program, some of the major cigarette manufacturers contribute on their own for biomedical research at medical and scientific institutions from coast to coast.

A Tobacco Institute news release on industry research says, "The tobacco industry stands ready today to make new commitments for additional valid scientific research that may shed light on the question of smoking and health."

Causal Cancer Claims Disputed

A new Tobacco Institute report, "Cigarette Smoking and Cancer: A Scientific Perspective," disputes the claim in the recent Surgeon General's report on smoking that tobacco is a major cause of cancers of the larynx, oral cavity, and esophagus.

"While smoking and esophageal cancers have been statistically related in some studies," TI's report said, "the link has not been reported worldwide."

TI points out that "esophageal cancer studies sometimes have reported statistical associations with several factors, including alcohol, diet, and smoking."

The TI report cites a recent Washington, D.C., study of black men, whose esophageal cancer rates are among the highest in the U.S. The researchers found "no significant risk associated with cigarette smoking."

"The evidence of a statistical association is inconsistent on both a worldwide basis and in Western countries," TI's report said. It quotes a recognized medical text: "The cause or causes of cancer of the esophagus are unknown."

Laryngeal Cancer

Laryngeal cancer is a relatively rare disease, TI's report points out. Its rates have been essentially the same year after year even though tobacco consumption has increased dramatically.

An English specialist in diseases of the larynx who received several major epidemiological studies considered them inadequate to establish a causal relationship between cigarette smoking and this cancer, the TI report said.

He said he found "no irrefutable evidence" that smoking causes laryngeal cancer, according to the report.

"The data do not warrant a conclusion that smoking causes laryngeal can-

cer," TI's report said. "Not only have the population studies provided insufficient information, but disease and smoking trends are inconsistent with the causal hypothesis," TI said.

Oral Cancer

"Claims that smoking causes oral and pharyngeal cancers are not supported by disease rate and cigarette consumption patterns," TI's report said. In fact, TI's report said, these claims "are without convincing scientific foundation."

"Contributing to the dilemma of oral and pharyngeal cancers are occupational risk factors, possible involvement of viruses, unusual patterns in mortality rates worldwide and negative animal work—that is, failed attempts to induce cancers with cigarette smoke," TI said.

S.G.: Youth Smoking Down

Surgeon General C. Everett Koop, at the news conference releasing his new report on cigarette smoking and cancer, called encouraging reports that tobacco smoking continues to decline among young people.

Koop cited a recently released study by the University of Michigan, done for the National Institute on Drug Abuse, showing that daily smoking among high school seniors has dropped from 29 percent in 1977 to 20 percent this year.

The study found daily cigarette use dropping among both male and female students, Koop said.

Risk Factors Numerous For Three Cancers

The new Surgeon General's report on smoking claims that cigarette smoking is a contributory factor in the development of cancers of the bladder, pancreas, and kidney.

TI's new report, "Cigarette Smoking and Cancer: A Scientific Perspective," points out that research findings about these cancers are confusing and even conflicting.

"Little is known about the cause or causes of pancreatic cancer," TI's report said.

It stressed that "many possible risk factors have been suggested, but no specific environmental factor has been consistently associated with the development of pancreatic cancer." One recent study, TI said, gained much media publicity because it linked this cancer with America's favorite beverage, coffee.

The TI document cited a University of Maryland study that linked pancreatic cancer with at least a dozen factors, including chronic alcoholism, gallbladder removal, and dietary factors, but which found no statistically significant relationship with smoking.

Urinary Tract Cancers

Urinary tract cancers—kidney and bladder—have been related to numerous other factors besides cigarette smoking, TI said. Its report said that government incidence data for these cancers reveal "enigmatic patterns."

"There are no easy answers for the questions regarding the causes of kidney cancer," TI said. It points out that an analysis of worldwide data does not show a statistically significant association.

Saccharin is among the items which have been linked to bladder cancer. Two government epidemiologists found bladder cancer rates significantly higher in counties with chemical manufacturing plants.

TI's report quotes a National Cancer Institute official: "Bladder cancer has, in fact, increased. We've generally attributed this to smoking, but perhaps we were wrong."

Based on the varying rates in men and women of different races, TI's report said, urinary tract cancers "hardly can be blamed on a single agent, such as cigarette smoking."

Editorials

A Different Perspective

The recent Surgeon General's report on smoking and cancer received page one coverage in certain parts of the nation: New York City and Washington, D. C., for instance. Other editors seemed to agree with The Tobacco Institute, which said, in a news release, the "conclusions in it are not essentially new."

These editors, in Indianapolis, Seattle, Atlanta, and elsewhere gave the story much less prominence.

Our mission in this special edition of The Tobacco Observer is not to revive the story all over again. Rather, it is to give prominence to a report, issued four days prior to the Surgeon General's, by The Tobacco Institute. It presents a different perspective: it is not an effort to rebut the Surgeon General but rather to add to the public dialogue on important scientific questions.

TI's report, in the words of its chairman, Horace R. Kornegay, is a "cogent review" that "pinpoints the serious gaps in our knowledge of cancer causation and demonstrates the critical need for further scientific research."

It points out that the claim that cigarette smoking causes cancer has not been scientifically proven. The causes of cancer are unknown. Many factors appear to be involved, TI said. More high quality scientific research is necessary to advance our knowledge.

Indeed, the TI review points out other cancer risk factors, including diet, physical and mental stresses, and environmental and occupational exposures. Perhaps it is time for a Surgeon General's report on one or more of these. We all might learn something.



Walker Merryman, Tobacco Institute vice president and director of communications, was a busy man the day of the Surgeon General's report, Feb. 22, as numerous TV stations requested interviews. This session, in TI's boardroom, is with a Washington, D. C., TV station.

News Conference

Surgeon General Denies Tobacco Polonium Charge

WASHINGTON, D.C.—Surgeon General C. Everett Koop, at a news conference releasing his new report on cigarette smoking, answered several questions from the media on other aspects of the tobacco controversy.

Koop said there is "insufficient evidence" to believe that polonium-210, a radioactive element that has been reported to be in tobacco smoke, can cause lung cancer.

Koop pointed out that this element, discovered in 1898, occurs in the air and in the soil worldwide. Press reports earlier this year cited studies claiming to link this radioactive material with lung cancer.

The Surgeon General said his department will not criticize the Federal Government's tobacco price support program. That program is an agricultural and economic issue, Koop said. He said his office deals with public health issues.

But Koop also stated that without the controversial loan program, tobacco prices might drop and the cost of

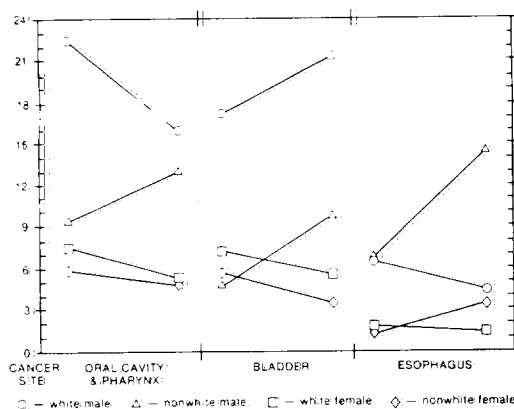
cigarettes could fall. He said the program doesn't have anything to do with young people beginning to smoke.

Koop said talks between his office and The Tobacco Institute "are coming along satisfactorily" on the Surgeon General's request for information on ingredients added to cigarettes. Koop said he would not discuss this further, because of the ongoing negotiations.

The Surgeon General stressed that the mission of his office on smoking is one of "education," and said his recently released report plays a large part in fulfilling that obligation.

The highly advertised, expensive commercial quit-smoking courses did not fare well in the recent Surgeon General's report on smoking. The report said, "Ninety-five percent of those who have quit smoking have done so without the aid of an organized smoking cessation program."

Cancer Incidence Rates per 100,000 U.S. Population



This chart from The Tobacco Institute's new review, "Cigarette Smoking and Cancer: A Scientific Perspective," doesn't appear in the new government report on smoking. It shows the changing rates of three kinds of cancer as measured by the government itself, first for 1947-49 and again for 1969-71. The government links all three of these cancers with cigarette smoking. If smoking is blamed for all three, asks The Institute, why aren't all the lines going in the same direction?

Lung Cancer

Continued from Page 1

other cancers, among them the environment, occupational exposures, psychological characteristics, physical and mental stresses, genetics, and diet.

Occupational exposure has been related statistically with increased lung cancer risk, TI's report said. It points out that National Cancer Institute researchers have found excessive lung cancer mortality rates in U.S. counties where paper, chemical, petroleum, and transportation industries are located.

The report quotes an expert on environmental contaminants, who wrote:

"A real question exists: if cigarette smoking is not diverting attention from the effects of occupational exposure on industrial workers."

TI's report challenges the claim that rising lung cancer death rates reported for women are due to increased smoking. It quotes a Canadian researcher, who wrote, "Much more significant than changes in women's smoking habits have been the changes in their employment."

TI's report points out that women who develop lung cancer now tend to be women who work, "supporting the

belief of the longtime director of the National Cancer Institute's environmental cancer program that not enough attention has been paid to their on-the-job exposures."

Complex Disease

TI's executive summary of its report poses several questions about the claim that "smoking causes cancer." It asks:

• "Why have animal experiments, designed to mimic human smoking, failed repeatedly to produce the type of lung cancer for which smoking is most often blamed?" • "Why do nonsmokers

develop this disease?" • "Why do the vast majority of heavy smokers not develop lung cancer?"

TI's report concludes: "The claim that cigarette smoking causes lung cancer has not been proven scientifically. The charge ignores basic unresolved scientific questions concerning animal experiments, smoking patterns and lung cancer rates, diagnostic variations, and many confounding factors."

"Lung cancer is an extremely complex disease. A one-sided attack on cigarette smoking as the causal agent does nothing to advance the search for its cause—and its cure," TI said.

'Tobacco People Are Quite Right'

By James J. Kilpatrick

Last week brought two reports on cigarettes and cancer: one from the Surgeon General, the other from The Tobacco Institute. The two were as predictable as the phases of the moon. The public-health people are convinced that cigarettes cause cancer. The tobacco people are convinced that the charge has yet to be proven.

A personal note: I have been a smoker off and on for the past 45 years. Five years ago I quit. I thought I had quit for good. Then one Friday morning I was mugged, and my shaking hands reached for a cigarette. It was all on earth I wanted. Now this lousy, satisfying habit has me back in its clutches and I wish it didn't. I can't think of one good thing to say about cigarettes.

With that apologia on record, let me make a point and state a moral. The point is that the tobacco people are quite right: The causal relationship of cigarettes and cancer hasn't been proved, it still is only statistically inferred. The moral is that we ought always to beware of statistics. If I were teaching journalism, I would require my students to take one year of statistics for every semester of news writing, and I'd turn out better reporters.

The anti-smoking people have spent hundreds of thousands of dollars trying to prove medically that cigarettes cause cancer. They once cut holes in the throats of 86 beagles and set the dogs to puffing furiously for 876 days. Then they killed the dogs and looked at their lungs. The findings were so uncertain that the study embarrassed everyone who had a hand in it. In another experiment, researchers shaved the ears of rabbits and the backs of mice, and painted the shaved skin with tobacco tar. It was as if the animals had smoked 100,000 cigarettes a day. When the experiment ended, the researchers had dead rabbits with dirty ears.

To this day, a quarter-century after anti-cigarette research began in earnest, a scientifically respectable animal study has yet to demonstrate even the minimal "proof" adduced as to saccharin, formaldehyde, and cyclamates. The evidence of causality is still statistical evidence.

Statistics are facts, but when that has been said a vast deal remains to be said. For facts come in all colors, sizes, shapes, and weights. It is a fact: let us agree, that "x" number of persons die of cancer. Very well. How factual is that fact? The tobacco people point out correctly that such facts are derived historically from death certificates, and death certificates are historically inaccurate.

Much of the evidence cited in last week's report from the Surgeon General is custom in terms of mortality data. Cancer victims are posthumously classified. An "x" percentage were smokers; a much lower "y" percentage were nonsmokers. Very well. Those are facts. But how factual are these facts? What about the prototypic dead smoker? When did he start smoking? What brands? How did he inhale? Where did he live at different ages in his life? What were his occupations?

Some of the statistics serve to puzzle, not to prove. Between 1949 and 1971, the rate of cancer of the pharynx went down as to white males, up as to non-white males. The rate of bladder cancer went up for men, down for women. Cancers of the esophagus went up for non-whites, down for whites. How come? If cigarettes were carcinogens as surely as cyanides are poison, every person who smokes would come down with cancer. But this is not so. Some heavy smokers live to their 90's and die not of cancer, but of boredom. How come? We don't know how come.

Cancer may be caused by elements in the air we breathe, the food we eat, the clothes we wear. The high inci-

dence of cancer among heavy smokers may be explained not by the chemistry of nicotine but by the personality of the individual. Maybe heavy smokers are more susceptible to stress, and maybe the stress triggers cancer.

I don't mean to challenge the persuasive nature of the statistical evidence. It is almost as persuasive as the trout in Thoreau's dish of milk. But to

assert, as the Surgeon General asserts, that tobacco is a "major cause" of cancer is to put more weight on statistical scaffolds than the structures were meant to bear.

(James J. Kilpatrick is a syndicated columnist in Washington, D. C. This column is reprinted with the permission of Universal Press Syndicate.)

History Observed

What is a "Surgeon General's report?"

Sixteen years ago, a new law required the Secretary of Health, Education, and Welfare to send Congress an annual report concerning current information on the health consequences of smoking and any legislative recommendations he might consider appropriate.

Over the years, the department—now called Health and Human Services—has pretty much suited itself in carrying out the requirement. Some years there was no report. Some years there was no Surgeon General to preside over it. Many times there were no legislative recommendations and in the few cases when there were, Congress generally ignored them.

Some of the reports were ballyhooed. Joseph A. Califano Jr. set the stridency record in 1979, shortly before he was dismissed from President Carter's cabinet. Others scarcely provided any news copy. All of them were costly to produce.

Common to all the reports is their combing of scientific literature for studies purporting to show that tobacco use is hazardous, and their omitting references that might cast doubt on the departmental conclusions about tobacco, or citing them and then criticizing them.

The selection problem has been critical over the years. So much so that a distinguished scientist was able to testify before a Congressional committee

that by 1972 alone there were at least 1,790 relevant scientific articles not cited in the departmental reports.

On its part, however, the Congress has summoned scientific witnesses to hearings from time to time in efforts to learn the full disparity of views about smoking and health.

That's why the law today—the one which requires the annual report as well as the warning on cigarette packages—declares a policy with which no one should disagree: That "the public may be adequately informed that cigarette smoking may be hazardous to health."

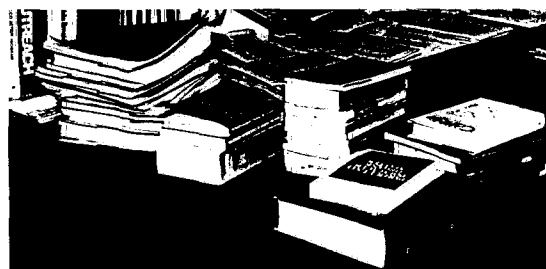
The Tobacco Observer presents information and comment on public events of interest to the tobacco industry. It recognizes that there is diversity of opinion about tobacco use and that charges against tobacco are widely publicized while less attention is given to differing views, which are included in our columns. Its aim is to aid full, free, and informed discussion in the public interest, in the conviction that the smoking and health controversy must be resolved by scientific research.

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William D. Toohy Jr., Tobacco Institute media relations director, handles one of the phone inquiries from newspaper, radio, and television reporters on TI's comments about the Surgeon General's report on smoking. TI answered 28 such calls in the hours immediately following the news conference releasing the government report.



Desk at the Tobacco Institute stacked with some of the hundreds of research papers and scientific publications the TI staff scanned to prepare the "Perspective" on smoking and cancer published by the association in January.

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